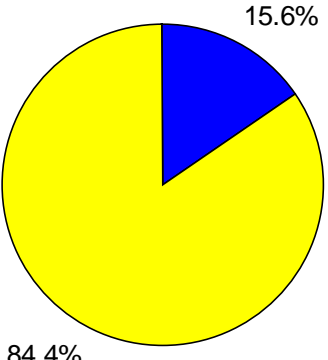


## 70-07-User Support Services

Fund/Agency: 001/70		Department of Information Technology
Personnel Services	\$1,950,008	<p style="text-align: center;"><b>CAPS Percentage of Agency Total</b></p> 
Operating Expenses	\$4,038,645	
Recovered Costs	\$0	
Capital Equipment	\$295,000	
<b>Total CAPS Cost:</b>	<b>\$6,283,653</b>	
Federal Revenue	\$0	
State Revenue	\$0	
User Fee Revenue	\$0	
Other Revenue	\$5,512,800	
<b>Total Revenue:</b>	<b>\$5,512,800</b>	
<b>Net CAPS Cost:</b>	<b>\$770,853</b>	
Positions/SYE involved in the delivery of this CAPS	23/23	

### ► CAPS Summary

The User Support Services (USS) CAPS in the Department of Information Technology (DIT) is responsible for providing direct technical support services for over 2,400 users in 22 agencies, and partners with the remaining County agencies to provide second tier technical support to a total of over 9,600 computing users. The role of User Support Services is comprehensive, providing a wide-range of technical services to our customers. Our services include telephone help desk support, dispatched technicians, systems tracking and monitoring, LAN environment user access and authentication, Exchange/Outlook management and administration, and desktop hardware (PC's) and software (Microsoft) administration and management. Our activities span the spectrum from daily operational requirements, to strategic planning and implementation of IT initiatives. The funding for USS staff and activities comes from Funds 505, 105 and 104.

## *Department of Information Technology*

---

### **Background:**

The basic services provided by this CAPS have always been a part of Department of Information Technology's mission, but have expanded dramatically in the past several years. Over the years, it has taken shape in several forms. From the original Information Center, which supported PCs and the Wang word processing support staff, the two groups were consolidated into Customer Service branch, which later became Technical Support Services. This consolidation became necessary as we migrated from the Wang systems to PCs and Local Area Networks (LANs) throughout the County, and the migration from mainframe based e-mail to the Microsoft Exchange/Outlook. DIT's latest reorganization now combines the Technical Support Services and Technical Support Center (help-desk activity) into an integrated business unit of three teams (Desktop Support Services, Application Support and Technical Support Center) whose primary purpose is to respond directly to the individual users' technical needs (problems, break/fix, or installation) via the phone or in person. Each of these organizational changes have resulted from streamlining efforts. This enables the organization to leverage staff and resources effectively and provide services in our rapidly changing technological environment, which has experienced phenomenal growth in both the expanded use of new technology and in the services provided to support it.

Within the past five years we have implemented major technological changes in our desktop environment transitioning from the Wang minicomputers and Mainframe terminals to PC's connected to OS/2, Novell, NT, and now the latest Windows 2000 Local Area Networks (LANs). Likewise, our e-mail systems have also been migrated from the minicomputer-based Wang Office and mainframe-based PROFS e-mail systems used, to the MS Exchange e-mail system and the Outlook client. This change represents the latest in client/server technology. As a result of all of these changes, the County's computing users and the technical support staff have faced a hectic and demanding pace as we have systematically and completely overhauled the County's computing environment to provide the latest and most powerful desktop computing tools to our users. These technology changes of the last five years were so rapid and wide-ranging that the users and the providers of technology support have been caught in the maelstrom, which is only just beginning to stabilize, albeit at an increased level of skill sophistication and support demand from users.

The introduction of LANs and PCs, along with the dramatic price cuts in the cost of desk-top hardware, have made the PC "standard equipment", which is assigned to almost every office worker. The increase in PC deployments has dramatically increased our support requirements as our user population has increased over the past five years. PCs with operating systems, applications and data residents on local hard drives, in addition to LAN applications and data files have opened a new world of end-user computing. This includes more complex technical support requirements for users who are just beginning to understand the power, possibilities, and problems associated with the new computing environment.

Prior to LANs and PCs, users had limited control over their access to applications and data; IT staff managed the user population desktop from the centralized Wang or Mainframe computer operator's console. The client/server technology has totally decentralized the desktop support, which can no longer be done from a centralized computer console. Additionally, the new technology gave users the ability to customize their desktop computer by adding files and applications thereby creating more support requirements. Consequently, there has been a cause and effect manifested by increased demand for technical support when users, who do not possess the necessary knowledge to fix the inevitable problems they create when making changes to their PCs. The proliferation of applications, larger data files and increased usage of e-mail with file attachments has also meant more support at the back end as well.

## *Department of Information Technology*

---

In order to manage this, USS operates under a standards policy for products, provides various awareness campaigns, develops use policies for adoption by the Chief Information Officer and the County Executive, and works with DIT's training unit to determine course offerings.

Here is a very brief review of how dramatically the client/server technology deployment has increased in the past five years:

	<u>1996</u>	<u>2001</u>	<u>Approx. % Increase</u>
Number of PCs	1,981	8,103 (est.)	400%
Number of Servers	<20	>120	600%
Number of E-mail Users	3,500	>10,000	300%
Number of associated merit staff	5	14	300%*

\* Service Level is 24 to 48 hours for dispatch.

In addition to the wide spread use of technology throughout the County, the rapid technological advances in software technology were requiring more robust PCs in order to support the new software releases. This rapid change in desktop technology with our limited capacity to buy new computer equipment each year created a County PC inventory which consisted of too many outdated PCs that were not capable of handling the new software requirements. Realizing that this was becoming a serious problem, a strategy was developed to replace PCs on a regular cycle to ensure the hardware could support the software implementations, which resulted in the creation of the PC replacement program in FY 1995, which replaced 675 PCs in its first year. Since that time over 8,100 PCs are now covered by the program, replacing about 1,500 to 2,000 computers annually. While this has worked, we are investigating best-practices and other acquisition strategies for supplying and managing the PC inventory for the future.

The tremendous increase in the user population along with the implementation of more advanced end-user computing tools which have created additional increases in direct and indirect user support. Consequently, the following strategies were developed to address the user support needs and expectations.

- The Technical Support Center opened in April 1998 to provide County users with a central point of contact for technical support.
- The Technology Infrastructure Division of DIT in October 2000 was reorganized and the User Support Services branch was established to put the teams most directly involved with user support together in the same business unit.
- User outreach programs are held to provide additional technical support.
- A Managed Services Assessment is underway to include current and target state definition and future service strategies.

In addition to daily operation support of its customers, the User Support Services branch also provides special support for ad hoc events. A sampling includes the annual Celebrate Fairfax Fair, local, State, and Federal elections, Senior Job fairs, and special events in the Library, such as summer programs for children requiring additional computer resources.

## *Department of Information Technology*

---

### **Initiatives:**

- **Automated Software Distribution.** Since 1997, the increasing pace of new software releases has required an effort to pilot new hardware and software technologies in a controlled environment with user participation prior to committing to vast rollouts of technology. This provides an opportunity to verify that operational objectives are met by the technology, identify the risks associated with implementation and confirm that business needs are satisfied. These pilots serve to prove concepts and identify technology that is not appropriate to integrate with the County's standards and result in more effective and efficient deployments of technology.

These pilot and upgrade projects are on going and require extensive USS involvement in all phases. User Support Services team members are participants in steering committees; actively involved in testing, configuring, implementation; and provide post implementation support. These projects are managed either by USS team members or by other Technology Infrastructure Division (TID) teams. Some of these projects include MS Office XP, SMS for software distribution and PC inventory, Exchange 2000 on an ES7000 platform, Windows 2000 Active Directory and the Ethernet conversion.

- **The vision of creating a central point of contact for technical support** has been realized by the successful implementation of the Technical Support Center (TSC). The Technical Support Center has become an information center too, providing consistent, proactive and timely information to users and IT staff. In support of the industry evolution of "Call Centers" to "Contact Centers", which incorporates automated e-mail support and live web assistance with the traditional phone support, the TSC will be adding these technology tools. The addition of these support strategies will further enhance the support opportunities for users.
- **Community Outreach.** In addition to the user support services, which are provided through direct contact via the Technical Support Services Center, we have extended our personal touch to the user community through the outreach efforts of the USS branch. Monthly MS Office/Outlook User Support meetings are held, technical tips are provided on the Infoweb and in the Courier, vendor briefings are held when appropriate for all County users.

### **Accomplishments:**

Our commitment to provide better service to our users requires that we continually evaluate WHO we support, WHAT we support, and HOW our support is provided. Our goal is to continually improve the delivery of our services through increased efficiency leading to faster response time and increased effectiveness leading to more accurate diagnosis and resolution of problems. Our proven successes in providing an excellent level of customer service, combined with a high level of technical expertise have led to increased requests by agencies for USS to provide direct IT support for agencies during the last five years totaling over 2,400 desktops, and indirect support for 7,000 countywide. The increased customer base presents opportunities for increased productivity potential in agencies, and more standardization and cost-effective deployment strategies with an enterprise perspective.

The Technical Support Center's implementation was a success because of thoughtful preparation, including user and technical staff input for its design, appropriate staffing, and technology tools available for use. The opportunity for other agencies to use the application has provided a central repository of technical information. Since its opening in 1998, the Technical Support Center has increased its customer base and extended hours of operation to 7 days a week and extended evening hours. The Technical Support Center has a unique role, in that this team is the first point of entry for not only agencies directly supported by DIT, but in some

## *Department of Information Technology*

---

cases, other agencies or for specific application users. The benefits realized include metrics that can be used not just by the TSC, TID or DIT, but also for all the users of the HelpQ problem and change request tracking application. These metrics provide a view of support that had not been quantifiable prior to the implementation of the Technical Support Center. For example, the average monthly call volume for 1998 was 804 and the average call volume for 2001 is 3,239. This represents an increase of 403 percent in the number of call received each month since the center's opening.

The introduction of MS Exchange/Outlook and MS Office was not only a huge project but also a defining moment in offering Fairfax County the ability to interact with other businesses to exchange information and data more efficiently. The previous e-mail systems and productivity applications were not compatible with other software so conducting business, as expectations rose was more and more difficult. The 10,000 user accounts and over 1.6 million mail messages being processed monthly in contrast with the 3,500 Office Vision accounts without file attachment capability speaks for itself.

From its modest beginning in FY 1995, the PC replacement program has increased from 675 to having over 9,000 PCs in the program. The original cycle of 5-year replacement was recognized as not aggressive enough in FY 1997 and was reduced to a 4-year cycle. The success of this program is evident in the ability for new technology to be introduced or existing technology to be upgraded because hardware can accommodate the requirements. Users are less constrained by hardware thanks to this program.

There are several challenges facing USS including staff turnover due to a variety of factors including requiring expertise across a wide range of technologies; providing timely customer service in the face of increased customer base and broad scope of service support including varying operating systems; and data storage and retention, particularly of e-mail as users want to keep and access their data that includes large files and/or graphics.

### **► Method of Service Provision**

Service Support Model for User Support Services includes 24 hours a day, 7 days a week, and 365 days a year support through the use of duty officers and on-call staff.

Business Hours: The Technical Support Center business hours are Monday-Thursday 7 a.m. to 9:30 p.m., Friday 7 a.m. to 6:30 p.m., Saturday 10 a.m. to 5 p.m., and Sunday 12 p.m. to 6 p.m. Staff is on site prior to and after these hours but phone support is available during these hours.

Desktop Support Services and Application Support core hours are 8 a.m. - 4:30 p.m. but staff are onsite as early as 6 a.m. and as late as 5:30 p.m., Monday through Friday.

Locations and Clientele: 43 locations across the County.

Methods of support: Onsite, telephone, e-mail, remote support, consulting are all used by User Support Services staff.

Technology tools used: MS Premier Support Contract, MS TechNet, Quintus and Help Q, Bindview asset manager, and CMS contract assistance.

# Department of Information Technology

## ► Performance/Workload Related Data

### Performance Objectives:

To improve the average first call problem resolution rate for DIT from 60 percent to 65 percent<sup>1</sup>.

Indicator	FY 1998 <sup>2</sup> Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Estimate
Input TSC staff dedicated to answering requests for service <sup>3</sup>	6	6	9	10	10
<b>Output:</b> Number of customer requests for service fulfilled by Technical Support Center <sup>4</sup>	8,324	18,046	36,873	38,869	41,000
<b>Efficiency:</b> Ratio of customer requests for service per TSC staff member <sup>5</sup>	1,054	3,322	4,097	3,886	4,100
<b>Service Quality:</b> Percentage of County employees satisfied with support from Technical Support Center <sup>6</sup>	89%	85%	86%	N/A	N/A
<b>Outcome:</b> Percentage of first-contact problem resolution	58%	64%	69%	60%	65%

<sup>1</sup> Requests for service that are entered and resolved within the Technical Support Center (TSC), by Technical Support Center staff.

<sup>2</sup> In FY 1998, the program was only in operation for 3 months.

<sup>3</sup> In FY 2000, staff was increased from 6/6.0 SYE positions to 9/9.0 SYE positions.

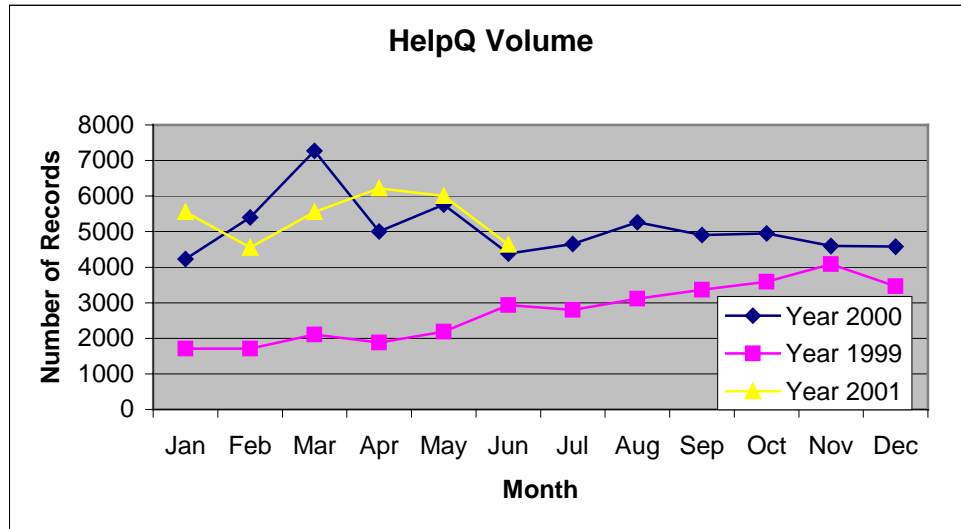
<sup>4</sup> Customer requests for service are those logged into Quintus, consisting of calls that were actually answered, e-mails and walk-ins. This number does not include change requests. FY 2001 reflects a 403 percent increase in call volume since 1998.

<sup>5</sup> TSC was not fully staffed entire year. Actual requests for service per TSC members on board is a higher number.

<sup>6</sup> The survey to determine if employees were satisfied with the Technical Support Center was not available in FY 2001.

## *Department of Information Technology*

The County uses e-mail as a major means of communication. DIT supports the infrastructure and equipment required to maintain the e-mail system. The table below depicts the number of transactions during a typical 30 day period, as well as on an annual basis.



### E-Mail Volume February 21 - March 22, 2001

#### Actual Totals\*

	<u>Sent</u>	<u>Rec'd</u>	<u>Total</u>
Board of Supervisors	6,819	10,544	17,363
All County E-Mail Users	739,221	936,431	1,675,652

#### Annualized Totals\*\*

	<u>Sent</u>	<u>Rec'd</u>	<u>Total</u>
Board of Supervisors	82,965	128,285	211,250
All County E-Mail Users	12,264,348	15,536,242	27,800,590

\*Figures are for mailboxes only and do not include mail sent or received by Public Folders.

\*\*Projection of annual totals based on data captured during the 30-day period covered in a recent report. The formula used is actual figure divided by 30 and multiplied by 365.